

CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Currently Amended): ~~[[The]]~~ A method of Claim 1 wherein said burst operation occurs on a coherent processor bus in a multiprocessor system, including at least two processors and a cache coherency controller, coupled to address concentration devices, the method operable in said cache coherency controller for improving coherent data transfers, the method comprising the steps of:

initiating a first memory transaction request command to a first processor of said multiple processors;

determining priority receipt status of a next memory transaction request;

expanding snoop responses and accumulated snoop responses to provide a coherency action for all cacheline requests utilizing a burst command;

forwarding said transaction requests from said master or said controller to a solitary global serialization device, said serialization device further comprising a multiple cacheline request indicator;

grouping multiple and sequential coherent transfers into a single coherent subsequent burst operation on said processor bus; [[and]]

determining occurrence of the burst operation;

timing said burst operation;

snooping said burst operation to form a plurality of snoop replies;

concentrating all addresses of said plurality of snoop replies to form a combined snoop response; and

broadcasting an agglomerated the combined snoop response of said snoop replies to a plurality of device entities.

4. (Original): The method of Claim 3 wherein said determining said occurrence of said burst operation comprises detecting an indication that a plurality of cachelines is

requested.

5. (Original): The method of Claim 3 wherein said snooping said burst operation comprises separating said burst operation into multiple cacheline requests on a bus.

6. (Currently Amended): The method of Claim [[1]] 3 wherein said snooping said burst operation comprises at least a bus and at least a cache directly supporting a burst operation.

7. (Canceled)

8. (Currently Amended): The method of Claim 4 wherein [[said]] each processor of said at least two processors support of coherency is greater than a single cacheline supports snooping a plurality of cachelines for the burst operation.

9. (Currently Amended): The method of Claim 3 wherein [[the]] broadcast of said ~~burst transfer~~ combined snoop response is between pluralities of processors.

10. (Currently Amended): The method of Claim [[4]] 3 wherein said determining ~~is a first-in first-out queue determination and wherein the step of queuing said cachelines~~ said occurrence of said burst operation includes the step of:

determining whether a previous cacheline request corresponding to said processor is already present in [[said]] a first-in first-out queue; and

queuing said cacheline request in response to a determination that said cacheline request is not already present in said first-in first-out queue.

11. (Original): The method of Claim 3 wherein accumulated snoop responses agglomerate as a combined response only on notification of individual responses of said entities within said processors.

12. (Canceled)

13. (Canceled)

14. (New): A method of performing a burst transfer on a bus with cache coherency, the method comprising:

initiating a burst transfer command on a bus connecting a plurality of processors, wherein the burst transfer command is a request to access a block of data that comprises two or more cachelines;

performing, by each given processor within the plurality of processors, a cache snoop of the burst transfer command to form a burst snoop response;

accumulating burst snoop responses for the two or more cachelines from the plurality of processors to form a combined snoop response; and

broadcasting the combined snoop response to the plurality of processors.

15. (New): The method of Claim 14, wherein initiating a burst transfer command comprises:

responsive to a plurality of transfer commands requesting to access a plurality of sequential cachelines from a plurality of entities within an initiating processor, accumulating the plurality of transfer commands to form the burst transfer command.

16. (New): The method of Claim 15, further comprising:

responsive to receipt of the combined snoop response at the initiating processor, separating the combined snoop response into a plurality of individual snoop responses; and

forwarding the plurality of individual snoop responses to the pluralities of entities within the initiating processor.

17. (New): The method of Claim 14, wherein performing a cache snoop of the burst transfer command comprises:

splitting, by a snooping processor within the plurality of processors, the burst transfer command into a plurality of single cacheline requests;
forwarding the plurality of single cacheline requests to a plurality of entities within the snooping processor, and
performing, by each entity within the snooping processor, a cache snoop of each of the plurality of single cacheline requests to form a plurality of single cacheline snoop responses.

18. (New): The method of Claim 17, wherein performing a cache snoop of the burst transfer command further comprises:

returning the plurality of single cacheline snoop responses from each entity within the snooping processor to a gathering function within the snooping processor, wherein the gathering function accumulates the plurality of single cacheline snoop responses to form a burst snoop response for the snooping processor.

19. (New): A data processing system comprising:

a plurality of processors; and
a bus connecting the plurality of processors,

wherein an initiating processor from the plurality of processors initiates a burst transfer command on the bus and wherein the burst transfer command is a request to access a block of data that comprises two or more cachelines;

wherein each given processor within the plurality of processors performs a cache snoop of the burst transfer command to form a burst snoop response;

wherein a snoop response gathering function accumulates burst snoop responses for the two or more cachelines from the plurality of processors to form a combined snoop response and broadcasts the combined snoop response to the plurality of processors.

20. (New): The data processing system of Claim 19, wherein, responsive to a plurality of transfer commands requesting to access a plurality of sequential cachelines from a plurality of entities within the initiating processor, a gathering function within the

initiating processor accumulates the plurality of transfer commands to form the burst transfer command.

21. (New): The data processing system of Claim 20, wherein, responsive to receipt of the combined snoop response at the initiating processor, a separation function within the initiating processor separates the combined snoop response into a plurality of individual snoop responses and forwards the plurality of individual snoop responses to the pluralities of entities within the initiating processor.

22. (New): The data processing system of Claim 19, wherein a separation function within a snooping processor within the plurality of processors splits the burst transfer command into a plurality of single cacheline requests and forwards the plurality of single cacheline requests to a plurality of entities within the snooping processor; and
wherein each entity within the snooping processor performs a cache snoop of each of the plurality of single cacheline requests to form a plurality of single cacheline snoop responses.

23. (New): The data processing system of Claim 22, wherein a gathering function within the snooping processor accumulates the plurality of single cacheline snoop responses to form a burst snoop response for the snooping processor.